

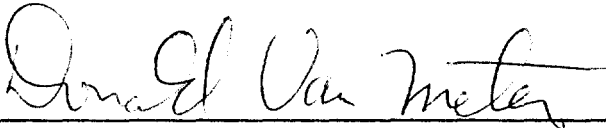
An Environmental Awareness and Recreation
Program for the Youth Conservation Corps of Indiana

An Honors Thesis (ID 499)

By

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AN ENVIRONMENTAL AWARENESS AND RECREATION PROGRAM
FOR THE YOUTH CONSERVATION CORPS OF INDIANA

The Youth Conservation Corps was first established as a three-year pilot program in the Dept. of the Interior and the Dept. of Agriculture through Public Law 91-378. This occurred on August 13, 1970. The purpose of the act was to further the development and maintenance of the natural resources of the United States by youth; the youth to whom will fall the ultimate responsibility for maintaining and managing these resources in the future. Along with the purpose of development and maintenance of natural resources, the purpose of Public Law 91-378 provided for the employment of American youth during the summer months. These young people represent all segments of society. The youth are employed in an outdoor atmosphere of the National Park system, the National Forest system, the National Wildlife Refuge system, and other public land and water areas administered by the Secretary of the Interior and the Secretary of Agriculture; thus creating an opportunity for understanding and appreciation of the Nation's natural environment and heritage.

The campers are young men and women who are permanent residents of the United States and its territories or

possessions. These young people must have attained the age of 15 but have not yet attained the age of 19. The YCC program is open to both sexes and youth of all social, economic, and racial classifications. No person may be employed as a member of the corps for a term in excess of ninety days during any single year. The Secretaries of the Interior and Agriculture may employ these youth during summer months without regard to civil service or classification laws, rules, or regulations. All programs developed for the YCC are developed with "safety first" in mind. This is to insure the safety, health, and welfare of its members.

On October 27, 1972, Congress expanded the YCC pilot program by passing Public Law 92-597. This law established a pilot grant program for state YCC projects. Through this program, grants are made to the States to assist them in meeting the cost of projects for the employment of young people to develop, preserve, and maintain non-Federal public lands and waters within the States. The next amendment came on September 3, 1974 in the form of Public Law 93-408. Congress had found that the YCC pilot program had demonstrated a high degree of success in meeting the purposes of the Act. Therefore, the intention of PL 93-408 is to expand the State program and to make the Federal YCC program permanent.

The Youth Conservation Corps has three equally important objectives. These three objectives for the Youth

Conservation Corps, as stated in PL 93-408, are as follows:

- 1) To provide gainful employment of America's youth, from ages 15 through 18, during the summer months in a healthful outdoor atmosphere.
- 2) To provide an opportunity for understanding and appreciating the Nation's natural environment and heritage.
- 3) To provide further development and maintenance of the natural resources of the U.S. by the youth who will ultimately be responsible for maintaining and managing these resources.

The purpose of this thesis is to develop a quality environmental awareness and recreation program that is structured, yet flexible, and able to be modified to meet the needs of individual Youth Conservation Corps (YCC) camps in any area of Indiana. The program is designed to be used as a guide. This program establishes a base from which to develop individual environmental awareness and recreation programs within the YCC structure. It is expected to be changed and modified for each particular camp situation.

A hypothetical YCC camp situation was used to develop this environmental awareness and recreation program. The camp is residential, consisting of approximately fifty campers. The coeducational camp has two sessions. Each session is four weeks long. Environmental awareness and recreation are the only aspects of the total YCC program in consideration for this thesis.

This environmental awareness program is to be used as a guide in developing a quality environmental awareness program in balance with the whole YCC program. The total

YCC experience includes the work projects, group living, interpersonal relations, recreation, and free time activities. Although this particular program does not involve the work projects, it must be stressed that the work projects are an important part of the total environmental awareness experience. As each camp will have its own unique work projects, they must integrate environmental awareness time into these projects. Environmental awareness will have more meaning and effect if it is not restricted to a scheduled time period each day or week. Instead, it must encompass the entire YCC experience. The integration of environmental awareness into the entire camp strengthens the program; helps to motivate the camp; increases decision making, teamwork, pride, and satisfaction in the work accomplishments; and increases knowledge about the environment and its management.¹

This environmental awareness and recreation program was developed to achieve the following goals:

- 1) To help YCC campers acquire strong feelings of concern for the environment and the motivation for actively participating in its protection and improvement.
- 2) To help YCC campers acquire a basic understanding of the total environment, its associated problems, and humanity's critically responsible presence and role in it.
- 3) To help YCC campers acquire social values and the ability to make sound choices while developing in them a sensitivity to the environment.

These goals are based on a set of objectives developed by the International Workshop in Environmental Education held in Belgrade, Yugoslavia, October 13-22, 1975. These goals

should broaden each individual camper's own awareness, knowledge, and attitude of the environment in which he lives.

To accomplish these goals, this program includes a variety of projects, investigations, field trips, recreation, and camp activities. These activities are arranged on a weekly schedule. The four weeks of the session are divided into four different environmental categories. The basis for the first week's activities are the basic ecological principles necessary for the understanding of our ecosystem. The second week centers on soil investigations, and the third week includes the study of water resources. Wildlife is the major theme for the final week. These four main topics will not only be studied individually, but will also be integrated into activities throughout the total program to show the importance of their interdependence upon each other within the environment. The importance of the interrelationships of these four topics will be stressed. Although the week's activities will be based on the one theme, the activities will not be limited to just that theme. It is important to include activities that reflect the interest of the campers, their work projects, and their camp living location.

The week's activities are then broken down into specific days. Each week's section will begin with a calendar of that week's events. The events will then be described using a lesson plan format. This is for the reader's ease in using the material. Educational resources are listed in the footnote section.

The activities developed for this environmental awareness program are based on the author's own experience with the Youth Conservation Corp. The author has spent one summer working as a "group living aid" for the Lincoln Hills YCC camp in the Hoosier National Forest. The duties included supervising the campers in their camp living situation and assisting the Assistant Camp Director and the Environmental Awareness Coordinator in providing an environmental education program. Through the environmental education program, the author taught a mini-class each week, assisted with the recreation program, led wildlife habitat investigations each week, and supervised field trips and camping trips.

A second summer was spent at Camp Olden YCC camp at Brookville, Indiana. As a staff co-leader, the author developed and implemented the entire YCC camp program. This included developing and leading the environmental awareness and recreation program for Camp Olden.

CALENDAR - WEEK NUMBER 1
BASIC ECOLOGICAL PRINCIPLES

Environmental Awareness Hours: 16

Day 1

Campers arrive; film of YCC, and slides of last year's camp are available. Evening, after dinner:

Orientation, 45 minutes:

1. Explain purpose of YCC, the work projects, the environmental education program, and the individual EA projects.
2. Present syllabus of the four weeks.
3. Present rules.

Campfire, two hours:

1. Clock Mixer
2. Sing-a-long

Day 2

Morning, one and one-half hours:

1. Give Environmental Awareness Appraisal Test.
2. Initiative games
 - a. "The Monster"
 - b. Blindfold game

Evening, two hours:

1. Group # 1 - Orienteering skills.
2. Group # 2 - Introduction to Ecology - Hike

Day 3

Evening, two hours:

1. Group # 2 - Orienteering skills
2. Group # 1 - Introduction to Ecology - Hike

Day 4

Evening

1. Swimming
2. Softball
3. Other

Day 5

Evening, two hours:

1. Blocked time for campers' individual environmental awareness projects.

Day 6

Noon, five minutes:

1. Evaluation of week's EA activities.
2. Recreation
 - a. Swimming
 - b. Softball
 - c. Other

Day 7

Morning, two hours:Investigation

1. Soil

Afternoon, four hours:

Field Trip

1. State Park
 - a. Visit the Nature Center.
 - b. Arrange meeting with Naturalist.
 - c. Hike with Naturalist.
 - d. Arrange meeting with Park Ranger.

FIRST DAY; SUNDAY

The first week starts off with the campers arrival. In one area of the camp a YCC film should be set up to help explain the YCC program to the new campers and their parents.² The campers always like to see slides of the last year's camp; if slides are available, have them set up in another area of camp. Various forms of recreation should be available to the campers once they are unpacked and settled. A staff person should be at each recreational site to lead the recreation, and to get acquainted with the campers. Volleyball is a good game to have set up. It starts the campers off early working as a team.

After the evening meal it is a good idea to have a short orientation session before the campfire begins. The author suggests having the orientation session in the dining hall immediately following the meal. During orientation all of the staff should be introduced, including the Camp Director, the Assistant Director, the Work Project Coordinator, and the Environmental Awareness Coordinator. Explain the purpose of the Youth Conservation Corps and its goals and

objectives. Also, each individual camp should have its own goals for the summer. If it does not then the campers may participate in creating their own goals.

The work projects need to be presented along with the environmental awareness program. The importance of the environmental education aspect of camp should be stressed. Give the campers an idea of what to expect and what to look forward to in the coming four weeks of camp. This is a good time to present the individual environmental awareness projects described in the following lesson plan. And of course, do not forget to cover the rules!

The campfire is next. Have the campers bring their flashlights. Those who have guitars should be encouraged to bring them to the campfire.

The author suggests starting the campfire off with a "get-to-know-ya" game. This particular game is called the Clock Mixer. This game is great in providing the opportunity for the campers to get to know each other and the staff. The game is explained in lesson plan number two.

After the Clock Mixer, have a couple of song leaders start the sing-a-long. If the sing-a-long is begun with enthusiasm, all the campers will soon be singing right along.

LESSON PLAN # 1
INDIVIDUAL ENVIRONMENTAL AWARENESS PROJECTS

Objectives:

- 1) To promote further development of a camper's own special interest in the outdoors.
- 2) To create an interest in an area that is little known to the camper.
- 3) To develop camper's own skills in working individually toward his/her own goal with the project.

Materials:

Each camper must make his/her own list of materials that are needed for the project. The costs should be kept down to a minimum. Whenever it is needed, substitutes for an item can be made. The substitutes should meet the camper's approval. The camp's own tools and materials should be used whenever possible, and when necessary, supervised by the staff. All campers need to be aware of safety while they are working on their projects.

Procedures:

During the orientation of the new YCC campers, the individual work projects should be explained thoroughly. A list of possible projects, or projects that have been done in previous years, should be made known to the campers. (A list of examples follows this lesson plan.) It is best for each camper to develop his/her own idea.

When the camper's project idea is approved by their staff person, a project contract is made for the camper. This contract lists the goals of the project and the means to which these goals will be accomplished. It also gives the date of completion. Three weeks are usually given to the campers to work on the project. And blocked time each week must be given to the campers to work on their projects.

Sometime during the last week of camp a presentation of all the projects should be made. This can be done in several ways. A YCC fair can be set up to display the projects. Other special events should be organized along with the displayed projects. Or the projects can be presented among each camper's living group. The counselor and his/her campers would organize a special time to have a small party to present the projects.

There are many ways for the campers to present projects to their fellow campers. It will depend a lot on the number of campers involved and their feelings on how they want to present their projects.

Evaluation:

The individual projects work best with a small group of campers. If you feel that you have too many campers for each camper to have an individual project, try breaking them into small groups. When they work alone there is a sense of pride in accomplishing their goals as expressed in the contract; and they are able to take home their project. But when the camper is part of a small group, they learn how to

work with each other to get something done. Whether working individually or in small groups, the environmental awareness project is a valuable experience.

In both cases, the campers should learn how to use various resources in putting together their projects. They should feel free to talk with any of the camp personal for suggestions or help with their projects. A few hours at the local library might be helpful to some. The community people who have knowledge in the area of a camper's project are also a resource for the campers to use.

The presentation of the project is just as important as the time spent working on the project. The atmosphere during the presentations should be friendly and informal to put the campers at ease. The campers should develop some speaking skills and listening skills through the presentation of their projects.

Follow-up:

The campers should be encouraged to take their projects home with them and to present their projects to their family members.

Examples of Individual Environmental Awareness Projects:

- 1) Plan and cook a meal over a campfire using various techniques.
- 2) Bake homemade bread in a campfire pit.
- 3) Make a reflector oven and demonstrate its use.
- 4) Design and present a primitive first-aid course for backpackers.

- 5) Cook a meal using wild edibles.
- 6) Lead a specialty hike.
- 7) Make a special collection (collect and identify).
 - a. insect
 - b. butterfly
 - c. leaf
 - d. wildflower
 - e. edible wild plants
- 8) Build a shelter for survival.
- 9) Build a bird house (specify bird).
- 10) Make teas using wild plants.
- 11) Cast several animal tracks in plaster and identify.
- 12) Use writing or artistic skills in expressing nature.
- 13) Make a wildlife check list and record the wildlife seen in the area.
- 14) Take slides of the camp and present as a slide show.
- 15) Demonstrate backpack cooking.

LESSON PLAN # 2
THE CLOCK MIXER

Objectives:

- 1) To provide an opportunity for the campers to talk with each other.
- 2) To help the campers get to know each other, and to feel comfortable with each other.
- 3) To provide an opportunity for the campers and the staff to talk with each other.

Materials:

- 1) Flashlight
- 2) Pencils
- 3) A mimeographed copy of the "Clock Mixer" game sheet for each camper.

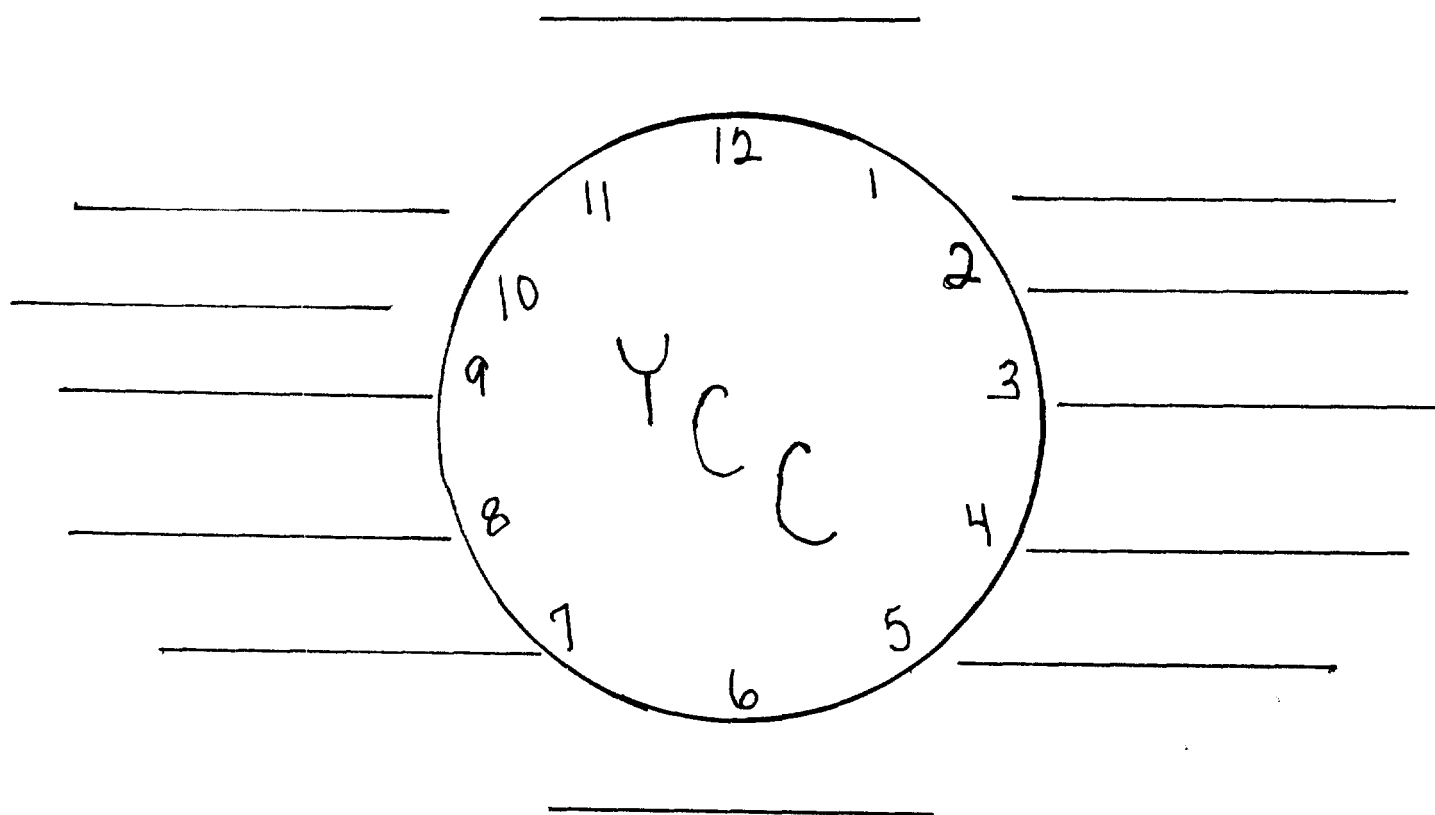
Procedures:

Each camper and staff person should have a Clock Mixer game sheet and a pencil. The first part of the game consists of filling in the twelve blanks with twelve names. The campers and staff have five minutes to fill these blanks in. To fill the blanks in one must find another person to exchange sheets with. These two people sign their names on the numbered line. For instance, they both sign their names on line number four. The sheets are returned to the original owner and then another person is sought out. After the five minutes is over the twelve lines should be filled in

with names.

Then the game leader calls out a number (1-12) and each person finds the camper who has his/her name on their sheet. These two people get together and talk for approximately two minutes. Then another number is called and the matching two people find each other and they talk for two minutes. This continues until all twelve numbers have been called.

Game Sheet:



Evaluation:

The Clock Mixer is a great game to play with a group

of people who do not know each other. The first five minutes when the campers are scrambling to fill their sheets with names gets the game off to a fun start. This five minutes is a short warm up to make the campers feel at ease. It is a good listening exercise too, for they must learn to give time for their partner to talk.

If there is enough time left before the sing-a-long, the Clock Mixer can be run through another time. But each person must find a person that they have not talked with yet to sign their sheets.

Follow Up:

During the rest of the four weeks, the campers should be encouraged to get to know all of their fellow campers. Although each camper will find a few very close friends, the importance of not limiting oneself to this small group of friends should be stressed to all campers.

SECOND DAY; MONDAY

The second day of camp starts off with the Environmental Awareness Appraisal test. This test contains questions about some of the things the campers will be learning throughout the summer. The Environmental Awareness Appraisal serves both as a pre-test and post-test for YCC participants.

This test serves three purposes. Taken together, the scores from all the camps in the United States are used as an indicator of program effectiveness that the administration uses to justify the YCC program to Congress. A second purpose is to give feedback to the staff on the effectiveness of their environmental awareness activities relative to the objectives of the program. Third, the test can help the enrollees; at the time of the pre-test it can show them some of the things they need to learn, and at the time of the post-test it can serve to review the things they learned during the summer.

The test should be administered at the beginning of camp and again at the end of camp. The pre-test should be given as close to the beginning of camp as possible. The author suggests giving the test before beginning environmental awareness instruction. The post-test should be administered during the last week of camp.

During the administration of the test create a relaxed atmosphere. Refer to the instrument as an appraisal

rather than a test. The campers should be told that they are not being graded. Explain to them the reasons that the appraisal is given. If it is possible, the appraisal should be administered out of doors to get away from the "class-room" atmosphere.

The enrollees may correct their own test while the answers are being read. It is a good idea to discuss the results with the campers. Have the enrollees look over the test to see which items they missed. This will also help them to see some of the material that will be taught during the session. After this discussion, the test should be put away until the administration of the post-test during the final week of camp.

When the campers have finished with the Environmental Awareness Appraisal, the author suggests playing two games to continue the orientation of the campers. The first activity is considered an "initiative" game. An initiative game is a clearly defined physical and/or mental task which a group is required to do. The initiative game is designed to require a joint effort to complete the task. It is a lesson in determination, teamwork, and planning.³ The second game is a sense sharpening exercise. This activity is related to perceiving the environment in new ways, becoming aware of more subtle facets of the environment, and discovering the different perspectives of people.⁴ These games are explained in lesson plans three and four.

The campers should be split into two groups of 36 and 14. The group of 36 will start with the initiative game and then move on to the sense sharpening exercise. The group of 14 will start with the sense sharpening exercise.

Monday evening is the beginning of the environmental education instruction. Following the evening meal, the campers should be divided into two groups. Group one will be learning orienteering skills, and group two will be taking a hike to identify some basic ecological principles. Each group should be divided further into smaller groups, about eight or nine campers per leader. Thus there will be three staff persons leading three separate groups in orienteering skills and three staff persons leading three groups on the hike. The following evening, the campers will switch groups. Each camper must participate in both the orienteering lesson and the hike.

LESSON PLAN # 3

"THE MONSTER"⁵

Objectives:

- 1) To develop a participant's awareness of the decision making process.
 - a. To accept and to recognize the problem.
 - b. To think through and analyze the situation.
 - c. To negotiate a solution to the problem.
- 2) To develop a participant's awareness of the roles involving leadership.
- 3) To develop a participant's awareness of the obligation of each and every member of a group confronted with a problem.

Procedures:

The leader should try to choose a task which is suited to the ability of the group. The instructor should make sure all rules, procedures, and safety considerations are understood before the activity begins. Always consider safety of the group and use spotters when some danger is possible. The objectives should be stated along with the presentation of the problem. Then the leader should step back and allow the group the opportunity to devise a plan to solve the problem. The instructor knows the solution but should let the group work on it alone, although sometimes the group may need a hint. If the group is not working together it

might be wise to have them start again.

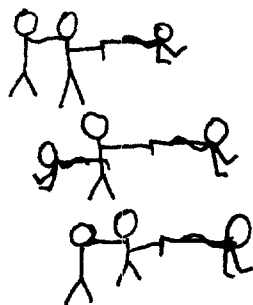
The problem:

The group must join themselves together to form a monster that walks with both hands and feet on the ground. The monster must have one more foot than the number of group members, and one less arm. Once the monster is created, it must move the distance of five feet and make a sound.

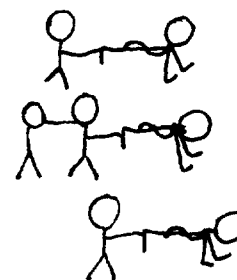
The group of 36 campers can try the "nine man monster." The group of 14 can try the "seven man monster."

Some Possible Solutions:

9-man monster



7-man monster



The staff might want to try working out the solutions themselves before presenting the game to the campers.

After a group has either completed or attempted the monster game, the instructor should take the time to discuss with the group all that happened. Questions that might be asked include the following: Did everyone participate? Who did not say anything? Why did someone not talk? What about the roles of the male versus female, the young versus the old, the strong versus the weak? How does this experience

relate to solving real life problems? The discussion should be thought provoking and, if possible, done by the participants willingly.

Evaluation:

Besides being fun, the initiative game is a morale booster. Being able to say "We did it!" provides encouragement when the campers find themselves in other problem solving situations. The initiative game should also be helpful in developing a participant's awareness of the decision making process, the roles involving leadership, and the obligations of each and every member of a group confronted with a problem.

The initiative game promotes group interaction, while at the same time, the problem requires the participants to take advantage of each group member's abilities. The group must also deal with the handicaps of the members, whether these limitations are ones of weight, strength, size, and so on.

Follow-Up:

Various types of initiative games may be played throughout the summer to strengthen group cooperation. The three step approach in solving a problem (Objective # 1) should be discussed several times during the camp session. The work crew leaders should begin each new work problem by going over these problem solving steps.

LESSON PLAN # 4
THE BLINDFOLD GAME⁶

Objectives:

- 1) To be able to perceive the environment in new ways.
- 2) To become more aware of the subtle aspects of the environment.
- 3) To discover and accept the different perspectives of people.

Materials:

- 1 cloth blindfold (bandanna) for each pair of campers.

Procedures:

The blindfold game includes a series of three walks, each about 10 minutes long. The campers are divided into pairs, one person being blindfolded. During the first 10 minute walk, one person guides the blindfolded camper by the hand. They should remain silent unless safety required speech. The second walk allows no physical contact between the two. The blindfolded person is required to self-orient and self-direct and the guide should only speak when safety demanded. In the third walk the blindfolded person should be brought to a plant and allowed to explore it in any non-visual ways he chooses. After being dis-oriented and led away, the blindfolded walker should go back without the blindfold and try to relocate the plant.

After each part of the activity the campers should discuss and compare their experiences with the other participants. Some of the discoveries the campers will make during the activity include wind changes, the different textures and qualities of ground covers, subtle temperature changes between micro-environments, shading caused by objects in the path, and the amount of noise present. Each person will discover something different, and each person will have a different experience.

Evaluation:

From the experiences in the blindfold walks, enrollees should be able to identify more subtle environmental factors in later activities. The campers should also be better able to recognize environmental problems that are not visually apparent, and become more aware of many more effects on the environment by their work projects.

Follow-Up:

A shorter version of the blindfold game may be played by work crew members during a lunchbreak. This will reaffirm the new ways of perceiving the environment experienced during the first blindfold walks.

LESSON PLAN # 5
ORIENTEERING SKILLS⁷

Objectives:

- 1) To develop the campers' map reading skills.
- 2) To develop the campers' ability to use a compass in the field.
- 3) To develop the campers' ability to determine his/her location in the field with the help of landscape features, map, and compass.

Materials:

- 1) Topographic map of the area for each camper, or a map of the area drawn using map symbols. It should be drawn as close to scale as possible.
- 2) Handout of map symbols.
- 3) Orienteering compass for each camper.
- 4) Pencil for each camper.
- 5) Ten orienteering controls. May use red and white paper or flags.

Procedures:

Orienteering is the skill or the process of finding one's way in the field with map and compass combined. This lesson plan is an introduction to the various skills involved in Orienteering. Other lessons or activities in Orienteering should be planned throughout the weeks of camp. The campers, with many opportunities to use the map and compass, will develop the skill to use the map and the compass with

ease, and will also find their powers of observation steadily developing.

PART ONE: MAP READING

Introduction

The activity leaders should first give an introduction to the topographic map. Then the practice game can be played. The following four paragraphs contain important material for the introduction.

A map is a reduced representation of a portion of the surface of the earth. The kind of map that is best used in Orienteering is a topographic map. Each topographic map is drawn to a specific scale. A scale is the amount that a distance in the field has been reduced for inclusion on the map. The three scales most commonly used are the scales of 1 unit to 250,000 units, 1 unit to 62,500 units, and 1 unit to 24,000 units. The larger the fraction the larger and clearer the details shown on it, and the smaller the territory covered by the same size map sheet.

Topographic map symbols show the details of a landscape. These map symbols are mapping's alphabet--they spell out the lay of the land. There are four types of map symbols used in Orienteering. Each has its own distinctive color:

Man-made features - Black

Water features - Blue

Vegetation features - Green

Elevation features - Brown

A map symbols handout should be given to the campers for their ease in learning the symbols. A sample of a handout is supplied at the end of the lesson plan.

Before an Orienteering exercise is begun, it is important to find the directions on a map. When a topographic map is placed with the reading matter right side up, what's up is north and what's down is south. That means the left margin is west and the right margin is east. The easiest way to know what direction to go on a map is by "orienting" the map. To "orient" a map means to turn it in such a way that north on the map fits north in the landscape, and that terrain features shown on the map, such as roads and rivers, are lined up with these features in the field.

Landmark Hunt

Objective:

- 1) Training in orienting a map and in locating landmarks.

Materials:

- 1) Map of the camp.
- 2) Pencil.
- 3) List of 10 landmarks to locate on the map.
- 4) Controls - 10.

Procedure:

Take the group to a starting place where a number of different landmarks can be seen. Provide each

player or buddy team with a map of the area, a pencil, and a list of 10 landmarks to be located on the map. (Controls should be set up at each landmark for the campers to find.) Before starting, the campers should circle each of the 10 landmarks on the map. The point where they are standing should also be circled.

The campers then have a certain amount of time, such as twenty minutes, to find the 10 landmarks. When a control is found, its letter should be recorded on the circled landmark on the map. Score 10 points for each landmark correctly found and circled on the map. The total score will be 100 points for all ten.

PART TWO: TRAVELING BY COMPASS

Introduction

Again, a short introduction to the compass is necessary before the actual practice game is played.

The best compass to use in Orienteering is the Orienteering compass. The conventional compass was improved into the modern Orienteering compass in which the compass housing revolves on a transparent base plate that acts as a protractor and direction finder.

The three main purposes for which the compass is used alone are these:

1. Finding directions - "bearings" - from a location.
2. Following a direction - a "bearing" - from a location.

3. Returning to an original location.

The Orienteering compass consists of three basic parts: (1) a magnetic needle, (2) a revolving compass housing, and (3) a transparent base plate. The magnetic needle of the compass is suspended on a needle-sharp point around which it swings freely on a sapphire bearing. The north end of the needle is painted red.

The rim of the compass housing is marked with the initials of the four cardinal points--North, East, South, and West--and is divided into degree lines. The transparent inside bottom of the compass is provided with an arrow that points directly to the housing's 360° N marking. This arrow is the "orienting arrow." The compass is oriented, turned so that the north marking of the compass points toward the magnetic North Pole, whenever the red north end of the needle lies over the orienting arrow, pointing toward the letter N on the rim of the housing. In the bottom of the compass housing are engraved several lines which run parallel with the orienting arrow. These lines are the compass' orienting lines.

The compass housing is attached to a rectangular transparent base plate. This is attached in such a way that it can be turned easily. A line to show direction is engraved on the base plate. It runs from the rim of the compass housing to the front edge of the plate where it spreads into the direction-of-travel arrow.

To find a bearing with the Orienteering compass, face squarely a distant point or landmark. Hold the Orienteering compass so that the direction-of-travel arrow is pointing straight ahead. Orient the compass by turning the compass housing without moving the base plate until the compass needle lies over the orienting arrow on the inside bottom of the compass housing, with its north part pointing to the letter N. Read the bearing, the degrees of the direction, on the rim of the compass housing at the spot where the black index pointer shows it to be.

To follow a bearing, set the compass for the direction in which the landmark lies by holding the compass with the direction-of-travel arrow pointing toward the destination. Turn the compass housing until the red north part of the compass needle points to the letter N on the rim of the housing. Proceed straight ahead in the direction the direction-of-travel arrow points.

Compass Competition

Objective:

- 1) Training in following compass bearings and measuring distances by walking.

Materials:

- 1) Orienteering compass.
- 2) Instruction card.

Procedure:

Before the start of the compass competition, each participant needs to know the length of his/her step,

or pace. To do this, mark off a distance of 200 feet over which the campers can walk to determine the length of their steps. The campers count off each time they put down the left foot. The campers should walk the 200 feet and back again, counting both ways. Divide the complete length covered, 400 feet, by the number of paces taken. This will give the length of the average pace, approximately five feet.

The compass course for the competition consists of twenty markers placed five feet apart on a straight east-west line. Number the markers consecutively from 1 to 20, with number 1 on the most westerly marker.

When ready to start, each participant is provided with an Orienteering compass and with an instruction card telling him/her at what mark to start and how to proceed. The instructions for the cards of ten players are below.

Start at Point 1

Go 36 degrees for 122 feet
Then 149 degrees for 58 feet
Then 235 degrees for 86 feet

Destination reached: No....(?)

Start at Point 2

Go 17 degrees for 104 feet
Then 150 degrees for 52 feet
Then 142 degrees for 64 feet

Destination reached: No....(?)

Start at Point 3

Go 38 degrees for 125 feet
Then 237 degrees for 90 feet
Then 186 degrees for 50 feet

Destination reached: No....(?)

Start at Point 4

Go 36 degrees for 122 feet
Then 174 degrees for 50 feet
Then 228 degrees for 74 feet

Destination reached: No....(?)

Start at Point 5

Go 22 degrees for 107 feet
 Then 158 degrees for 54 feet
 Then 186 degrees for 50 feet

Destination reached: No....(16)

Start at Point 6

Go 3 degrees for 100 feet
 Then 132 degrees for 74 feet
 Then 225 degrees for 69 feet

Destination reached: No....(8)

Start at Point 7

Go 34 degrees for 119 feet
 Then 186 degrees for 50 feet
 Then 228 degrees for 74 feet

Destination reached: No....(8)

Start at Point 8

Go 346 degrees for 102 feet
 Then 129 degrees for 78 feet
 Then 211 degrees for 58 feet

Destination reached: No....(9)

Start at Point 9

Go 346 degrees for 102 feet
 Then 129 degrees for 78 feet
 Then 186 degrees for 50 feet

Destination reached: No....(15)

Start at Point 10

Go 343 degrees for 104 feet
 Then 141 degrees for 64 feet
 Then 145 degrees for 61 feet



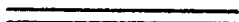


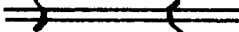
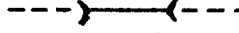
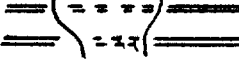






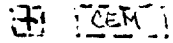



Destination reached: No....(19)

Each participant goes to the marker which has the number that corresponds to the starting point on his card and proceeds according to instructions. When he/she has finished, he/she writes down the number of the marker nearest to the destination he/she has reached (all the routes lead back to markers on the course line) and turns the card over to the judge. The correct destinations for each of the starting points are found in parenthesis.

If the player reaches the correct destination he receives a score of 100 points. Otherwise, the judge deducts from his score of 100 points, 1 point for each foot of error, or 5 points for each marker from the correct one. Run the game three times with different starting points for a possible maximum score of 300 points.

TOPOGRAPHIC MAP SYMBOLS

Man-Made Features:

Hard surface highway, heavy duty	
Hard surface highway, medium duty	
Improved dirt road	
Unimproved dirt road	
Trail	
Bridge, road	
Footbridge	
Ford, road	
Single track railroad	
Multiple main line track railroad	
Buildings (barn, warehouse, etc.)	
Buildings (dwelling, place of employment)...	
School	
Church	
Cemetery	
Telephone, telegraph, pipe line, etc.	
Power transmission line	
Open pit or quarry	

Water Features:

Lake or pond



Perennial streams



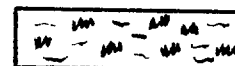
Spring



Water well

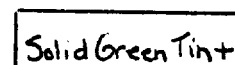


Marsh or Swamp

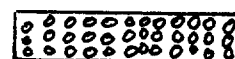


Vegetation Features:

Woods - brushwood



Orchard



Vineyard



Scrub



Elevation Features:

Index contour



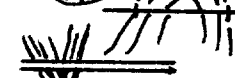
Intermediate contour



Depression contours



Cut



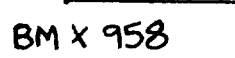
Fill



Large earth dam or levee



Sand area, sand dunes



Monumented bench mark, spirit level elev. ..

BM X 958